Avira’s Web Reputation API enables security vendors and service providers to quickly and easily identify websites, URLs and domains that may pose a threat to internet users.

Using a RESTful JSON API, client devices or online services can query the Avira URL Cloud (part of the Avira Protection Cloud) and receive a URL’s threat classification and the corresponding domain’s content categorization.

Avira’s Web Reputation API enables a real-time, site-specific query approach to identifying malicious URLs or inappropriate internet sites. Delivered as part of Avira’s portfolio of Threat Intelligence solutions, the API provides an on-demand, usage-based alternative to a threat feed of web reputation data. It is an ideal solution for Security as a Service, Firewalls, Routers, Email Scanning, Web Traffic scanning and Internet content filtering.

The reputation data provided by the API includes:

**Threat Classification**

The client submits one or more URLs to the service. It receives back a single response containing a security classification for each URL that it is either blacklisted (it contains Malware, Phishing or Spam), that it contains Potentially Unwanted Applications, Potentially Malicious Search Engines, or that the URL is clean and safe. The information can be used protect users from accessing URLs, domains, subdomains or IPs that may present a threat to them.

**Content Categorization**

The same response to the client can optionally deliver real-time content categories of the corresponding domain compliant to IAB-1, tier 1 and 2. Applied at a domain or sub-domain level, the 400+ categories are particularly useful for solutions requiring parental control, productivity or domain type. Examples of categories include: IAB25-3 Adult Content, IAB12-WS1 Social Networking, or IAB17 Sports.

**Key Features:**

- Distributed, highly available and fault tolerant
- Cache friendly with white lists and exception lists for high performance
- Statistics and quota services for usage control
- Near match algorithm and smart path inheritance deliver extended coverage
- Multiple language support

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**WEB REPUTATION**

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**Database**

![Dynamic File Analysis](image1)

![Machine Learning](image2)

![Heuristics Engine](image3)

**AVIRA PROTECTION CLOUD**

**Presentation**

- **Content** File Information: Malware, Phishing, Spam, PUA, Clean

**Web Reputation API**

- **Content** Categorization of over 400 categories at domain or subdomain level - IAB-1, tier 1, tier 2
IMPLEMENTATION

In order to communicate to the Avira URL Cloud, the client first submits its Avira API key to the service for authentication, and then sends the requested URL with a request in one of the supported languages: American English, German, Spanish, French Italian, Dutch and Portuguese (Brazilian).

To maximise efficiency the Avira URL Cloud can deliver white-lists and exception-lists to cache within the client device or privately hosted cloud security service. Caching URLs, domains, and sub-domains that are known to be clean and malicious for the recommended TTL avoids queries being forwarded to the Avira URL Cloud unnecessarily, delivering the most cost-effective performance.

APPLICATION

The Web Reputation API is a non-intrusive approach to delivering a secure and safe browsing experience for web users. It avoids the need to implement complex technologies such as Deep Packet Inspection or Man-in-the-Middle techniques to classify or categorize websites and content.

It is an ideal solution for vendors and service providers looking to protect consumers or business users from malicious or inappropriate internet sites, and is of particular use to Managed Security Service Providers (MSSP), Firewall and Unified Threat Management (UTM) providers, Security Operation Centres (SOCs), value added and mobile security providers.

AVIRA URL SAFETY CLOUD

Similar functionality to Avira’s Web Reputation API is available in the AWS Marketplace: Avira URL Safety Cloud. The URL Safety Cloud provides developers with a simple way to implement the threat classification element of Avira’s Web Reputation API, bought online as a SaaS solution.